



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,409	03/16/2004	Paul N. Stoving	08215-540001 / P03-026853	3843
26171	7590	04/25/2006	EXAMINER	
FISH & RICHARDSON P.C. P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			FISHMAN, MARINA	
			ART UNIT	PAPER NUMBER
			2832	

DATE MAILED: 04/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/802,409	STOVING ET AL.	
	Examiner	Art Unit	
	Marina Fishman	2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 5, 8, 18, 21, 22, 24 - 28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 8, 27 and 28 is/are allowed.
- 6) ☒ Claim(s) 18, 21 and 24-26 is/are rejected.
- 7) ☐ Claim(s) 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>03/29/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

General status

1. This is a Final Action on the Merits for RCE. Claims 1 - 5, 8, 18, 21, 22, 24 - 28 are pending in the case and are being examined.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 18, 21, 22 and 24-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention:

In Claim 18, it is not clear what is meant by "a tube provided through the seal and including cured liquefied encapsulation material to block the passage of air between an exterior of the seal and the cavity" (Is cured liquefied encapsulation material attached to one end of the seal tube, so that it blocks the flow of material?) Also, since the liquefied encapsulation material, once cured will be in the solid form and therefore will not flow (or transmit, as recited in Claim 21) in open space or through the tube (irrespective of the diameter of the tube).

Claim 21, fails to recites an important element and that is that the end of the tube exterior to the hollow housing (lower end of the tube 202), is positioned in a space between the mold and the seal and is positioned in a way that during the molding process of the encapsulation material around the seal and the vacuum interrupter, the liquefied encapsulation material can enter the tube due to

Art Unit: 2832

pressure differential between the space and the air filled cavity of the hollow housing. This part of the limitation is a process limitation for making the product, i.e. product by process limitation.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 18, 21, 24 - 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pflanz [US 3,849,617].

Pflanz disclose a vacuum switching device comprising:

- a vacuum interrupter [10];
- a hollow housing adjacent to the vacuum interrupter [Figure 1];
- a seal [11,14] provided around the vacuum interrupter and the hollow housing, the seal defining a cavity [71,72, 23] within the hollow housing; and
- a tube [24; Column 2, lines 60-65] provided through the seal [14], the tube disposed such that a first end of the tube accesses the cavity and a second end of the tube accesses an exterior of the seal;

- an operating rod [27, Claim 26].

Regarding Claims 18 Pflanz discloses that the tube [24] is sealed [Column 2, line 66]. However, fails to disclose the size of the tube. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the tube of adequate size so as to allow passage of air (see Column 2, lines 59-64). The limitation "sealed with cured encapsulation..." is being treated as a product by process limitation. As set forth in MPEP 2113, product by process claims are NOT limited to the manipulation of the recited steps. The tube [24] provided by Pflanz is structurally identical to that claimed by Applicant. Therefore, the burden is shifted to Applicant to show an unobvious difference [MPEP 2113].

Regarding Claim 25, Pflanz discloses that that the seal [11,14] can be made of any suitable material [Column 2, lines 48 – 51]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the encapsulation material include a pre-filled, hot-curing, two-component epoxy resin, since it is been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability. [In re Leshin, 125 USPQ 416.]

6. Claims 18, 21, 24 - 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumbera et al. [US 4,168,414] in view of Pflanz [US 3,849,617].

Kumbera et al. disclose a vacuum switching device comprising:

- a vacuum interrupter [3];

Art Unit: 2832

- a hollow housing adjacent to the vacuum interrupter [42, Figure 3];
- a seal [23, 51] provided around the vacuum interrupter and the hollow housing the seal defining a cavity [space between element 48 or 50 and bottom end of element 42, Figure 3] within the hollow housing.

Kumbera et al. discloses all the elements of claimed invention, except for a tube through the seal. Pflanz, discloses a tube [24]. It would have been obvious to one of ordinary skill in the art at the time the invention is made to provide a tube through the seal in the interrupter of Kumbera et al., as suggested by Pflanz in order to evacuate the space [Pflanz, column 2, lines 59-64].

Regarding Claim 21, since the tube is sealed after evacuation, the diameter of the sealed tube will be small enough not to allow liquefied encapsulation material from outside of the vacuum switching device. Regarding Claims 24 and 25, the tube, in the modified vacuum switching device will have first end inside the cavity and the second end exterior to the vacuum switching device. The second end being sealed, it would have been obvious to seal it with an encapsulation material. The selection of a particular material for the encapsulation would be an obvious matter of design choice. Regarding Claim 26, an operating rod [40] extending through the seal is disclosed by Kumera et al. in Figure 3.

Allowable Subject Matter

7. Claim 22 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments filed March 1, 2006 have been fully considered.

Claims 1 - 5, 8, 27 and 28 are allowed.

With regard the arguments related to Pflanz (Claims 18, 21, 22 and 24-26), the Applicant has argued that "Pflanz does not describe or suggest at least a tube provided through seal and including cured liquefied encapsulation material to block the passage of air between an exterior of the seal and a cavity." As pointed out above, in the 112, second paragraph rejection, relating to the limitation "cured liquefied encapsulation material", this limitation is vague and confusing and will require additional clarification. The tube of Pflanz, is intended to transfer air between interior and exterior space and it would also not allow cured liquefied encapsulation material from exterior space to the interior. It is note worthy that neither the claim nor the specification explicitly disclose that the tube is open at both the ends (it is however implied due to use to the tube- to transfer air).

The Applicant has argued (page 9, first full paragraph, lines 9-10) "Pflanz to disclose that the tube 24 includes cured liquefied encapsulation material." Since none of the claim includes the argued limitation "tube includes cured liquefied encapsulation material" the relevance of this argument is not understood.

Art Unit: 2832

The Applicant has also argued about the Kumbera, Pflanz combination. Since this argument is related to cured liquefied encapsulation material, once the 112, second paragraph clarification is received and incorporated into the claim, the Examiner will be in better position to respond to the arguments.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marina Fishman whose telephone number is 571-272-1991. The examiner can normally be reached on 7-5 M-T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2832

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marina Fishman
April 3, 2006


ELVIN ENAD
SUPERVISORY PATENT EXAMINER
4/4/06